MON192CL10

BOSCH

Important Safeguards

1. Read, Follow, and Retain Instructions - All safety and operating instructions should be read and followed before operating the unit. Retain instructions for future reference.

2. Heed Warnings - Adhere to all warnings on the unit and in the operating instructions.

3. Attachments - Attachments not recommended by the product manufacturer should not be used, as they may cause hazards.

4. Installation Cautions - Do not place this unit on an unstable stand, tripod, bracket, or mount. The unit may fall, causing serious injury to a person and serious damage to the unit. Use only manufacturer-recommended accessories, or those sold with the product. Mount the unit per the manufacturer's instructions. Appliance and cart combination should be moved with care. Quick stops, excessive force, or uneven surfaces may cause the appliance and cart combination to overturn.

5. Cleaning - Unplug the unit from the outlet before cleaning. Follow any instructions provided with the unit. Generally, using a damp cloth for cleaning is sufficient. Do not use liquid cleaners or aerosol cleaners.

6. Servicing - Do not attempt to service this unit yourself. Opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

7. Damage Requiring Service - Unplug the unit from the main AC power source and refer servicing to qualified service personnel under the following conditions:

   •When the power supply cord or plug is damaged.
   •If liquid has been spilled or an object has fallen into the unit.
   •If the unit has been exposed to water and/or inclement weather (rain, snow, etc.).
   •If the unit does not operate normally, when following the operating instructions. Adjust only those controls specified in the operating instructions. Improper adjustment of other controls may result in damage, and require extensive work by a qualified technician to restore the unit to normal operation.
   •If the unit has been dropped or the cabinet damaged.
   •If the unit exhibits a distinct change in performance, this indicates that service is needed.

8. Replacement Parts - When replacement parts are required, the service technician should use replacement parts specified by the manufacturer or that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electrical shock or other hazards.

9. Safety Check - Upon completion of servicing or repairs to the unit, ask the service technician to perform safety checks to ensure proper operating condition.

10. Power Sources - Operate the unit only from the type of power source indicated on the label. If unsure of the type of power supply to use, contact your dealer or local power company.

    •For units intended to operate from battery power, refer to the operating instructions.
    •For units intended to operate with External Power Supplies, use only the recommended approved power supplies.
    •For units intended to operate with a limited power source, this power source must comply with EN60950. Substitutions may damage the unit or cause fire or shock.
    •For units intended to operate at 24VAC, normal input voltage is 24VAC. Voltage applied to the unit's power input should not exceed 30VAC.
    User-supplied wiring, from the 24VAC supply to unit, must be in compliance with electrical codes (Class 2 power levels). Do not ground the 24VAC supply at the terminals or at the unit's power supply terminals.

11. Coax Grounding - If an outside cable system is connected to the unit, ensure that the cable system is grounded. U.S.A. models only - Section 810 of the National Electrical Code, ANSI/NFPA No.70, provides information regarding proper grounding of the mount and supporting structure, grounding of the coax to a discharge unit, size of grounding conductors, location of discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.

12. Grounding - This unit may be equipped with a 3-wire grounding plug (a plug with a third pin, for grounding). This safety feature allows the plug to fit into a grounding power outlet only. If unable to insert the plug into the outlet, contact an electrician to arrange replacement of the obsolete outlet. Do not defeat the safety purpose of the grounding plug.

    •Outdoor equipment should only be connected to the unit's inputs after this unit has had its grounding plug connected to a grounded outlet or its ground terminal properly connected to a ground source.
    •The unit's input connectors must be disconnected from outdoor equipment before disconnecting the grounding plug or grounding terminal.
    •Proper safety precautions such as grounding should be followed for any outdoor device connected to this unit.

13. Lightning - For added protection during a lightning storm, or when this unit is left unattended and unused for long periods of time, unplug the unit from the wall outlet and disconnect the cable system. This will prevent damage to the unit due to lightning and power line surges.

For Indoor Product

1. Water and Moisture - Do not use this unit near water - for example, in a wet basement, in an unprotected outdoor installation or in any area classified as a wet location.

2. Object and Liquid Entry - Never push objects of any kind into this unit through openings, as they might touch dangerous voltage points or create short circuits, resulting in a fire or electrical shock. Never spill liquid of any kind on the unit.

   Power Cord and Power Cord Protection - For units intended to operate with 230VAC, 50Hz, the input and output power cord must comply with the latest versions of IEC Publication 227 or IEC Publication 245.

3. Power supply cords should be routed so they are not likely to be walked on or pinched. Pay particular attention to location of cords and plugs, convenience receptacles, and the point of exit from the appliance.

4. Overloading - Do not overload outlets and extension cords; this can result in a risk of fire or electrical shock.

For Outdoor Product

Power Lines - An outdoor system should not be located in the vicinity of overhead power lines, electric lights or power circuits, or where it may contact such power lines or circuits. When installing an outdoor system, extreme care should be taken to keep from touching power lines or circuits, as this contact might be fatal. U.S.A. models only - refer to the National Electrical Code Article 820 regarding installation of CATV systems.

For Rack-mount Product

1. Ventilation - Do not place this equipment in a built-in installation or rack, unless proper ventilation is provided, or the manufacturer's instructions were followed. The equipment must not exceed its maximum operating temperature requirements.

2. Mechanical Loading - When rack-mounting the equipment, ensure that a hazardous condition is not created by uneven mechanical loading.

Safety Precautions

CAUTION

RISK OF ELECTRIC
SHOCK. DO NOT OPEN!

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol indicates the presence of uninsulated "dangerous voltage" within the product's enclosure that can cause an electric shock.

This symbol indicates the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Installation should be performed by qualified service personnel only in accordance with the National Electrical Code or applicable local codes.

Power Disconnect. Units with or without ON-OFF switches have power supplied to the unit whenever the power cord is inserted into the power source; however, the unit is operational only when the ON-OFF switch is in the ON position. The power cord is the main power disconnect for all units.

FCC & ICES INFORMATION

(U.S.A. and Canadian Models Only)

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) This device must accept any interference received,

including interference that may cause undesired

operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules and ICES-003 of Industry Canada. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

• Reorient or relocate the receiving antenna.

• Increase the separation between the equipment and receiver.

• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

• Consult the dealer, or an experienced radio/TV technician for help.

Intentional or unintentional changes or modifications, not expressly approved by the party responsible for compliance, shall not be made. Any such changes or modifications could void the user's authority to operate the equipment.The user may find the following booklet, prepared by the Federal Communications Commission, helpful: How to Identify and Resolve Radio-TV Interference Problems. This booklet is available from the U.S. Government Printing Office, Washington, DC 20402, Stock No. 004-000-00345-4.

Preface

This guide describes how to install the MON192CL10 monitor.

Audience

This guide is intended for qualified installation and service personnel who are familiar with the applicable national and local electrical codes.

Document Conventions

Convention	Meaning
Bold	Denotes a part, item, or assembly.
Italic	Denotes a reference to another paragraph, figure or table.
<u>Underline</u>	Used to emphasize a point.
courier	Denotes the actual name of an object, the exact code that should be typed or a message returned from a system.

Symbols

You may encounter these symbols within the document. Explanatory text accompanies each symbol, which provides additional information detailing the operation or highlighting safety information.

NOTICE! Notices inform you of essential but non-critical information. Read these messages carefully as any directions or instructions contained therein can help you avoid making mistakes.

CAUTION! Cautionary messages provide critical information that help you reduce the chance of losing data or damaging the system. Please heed these messages.

WARNING! Warnings highlight information, that if overlooked may cause damage to the system or result in personal injury. Take warnings seriously.

DANGER! Danger messages denote the presence of electrical equipment that may cause electric shock or electrocution. Take care when you see this symbol to avoid serious injury or death.

Customer Support and Service

If this unit needs service, contact the nearest Bosch Security Systems Service Center for authorization to return and shipping instructions.

Service Centers
USA
Phone: 800-366-2283 or 585-340-4162

Fax: 800-366-1329

Email: cctv.repair@us.bosch.com

Technical Support
Phone: 800-326-1450

Email: technical.support@us.bosch.com

CCTV Spare Parts
Phone: 800-894-5215 or 408-957-3065

Fax: 408-935-5938

Email: BoschCCTVparts@ca.slr.com

Canada
Phone: 514-738-2434

Fax: 514-738-8480

Europe, Middle East & Asia Pacific Region
Phone: 44 (0) 1495 274558

Fax: 44 (0) 1495 274280

Email: rmahelpdesk@solectron.com

For additional information, see www.boschsecurity.com

Related Publications

Refer to the latest Bosch Security Systems, Inc. Databook for the most up-to-date datasheets. To obtain a copy of the Databook, please contact your local Bosch representative.

You can also visit the Bosch Security Systems World Wide Web site at: http://www.boschsecurity.com to view a current listings of our publications.

Table of Contents

1   Unpacking

This equipment should be unpacked and handled with care. If an item appears to have been damaged in shipment, notify the shipper immediately.

Verify that all the parts listed in the Parts List below are included. If any items are missing, notify your Bosch Security Systems Sales or Customer Service Representative.

The original packing carton is the safest container in which to transport the unit and must be used if returning the unit for service. Save it for possible future use.

1.1   Parts List

The following table lists the parts included:

Quantity	Part
1	MON192CL10 Color LCD Flat Panel Monitor
1	Installation manual
2	Power Cords 3-wire with grounded plug 1.8 m (6 ft) long
	1 U.S plug type
	1 European Continental plug type
1	Power supply extension cable, 1.5 m (5 ft)
1	DVI-D to DVI-D cable, 1.5 m (5 ft)
1	DVI-A to VGA (D-SUB) cable , 1.5 m (5 ft)
1	Audio cable, 1.5 m (5 ft), 1/8 in. 3 cord mini phone jack

2 Exploded View
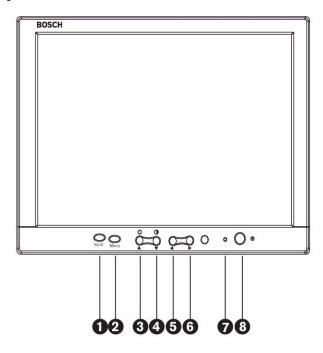
Fig. 2.1 Front Panel MON192CL10

Reference	Button	Description	
1	Input Button	Selects the signal to be displayed	
2	Menu Button	Selects the on-screen display (OSD)	
3	▲	Adjusts the brightness	Scrolls up in the OSD
4	▼	Adjusts the contrast	Scrolls down in the OSD
5	◀	Decreases the value	Scrolls left in the OSD
6	▶	Increases the value	Scrolls right in the OSD
7	LED Indicator	Power on (green) Standby (amber) Sleep mode (flashing amber)	
8	Green Power Button	Display power (On/Off)	
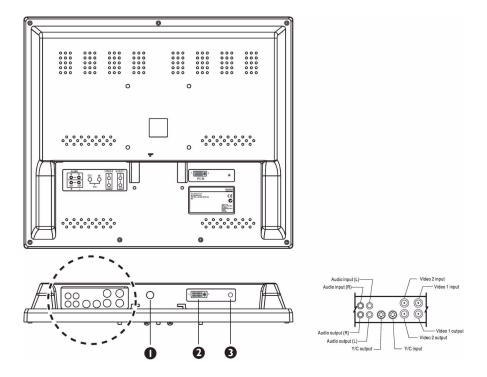
Fig. 2.2   Back Panel MON192CL10

Reference	Button
1	Power input connector from base or optional power supply
2	DVI-I connector
3	PC audio input

The base unit contains the main connectors that supply power to the monitor.
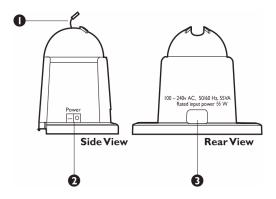
Fig. 2.3   Base MON192CL10

Reference	Button
1	Power supply connector to display
2	Power supply On/Off
3	Power cord connection

3   Description

The MON192CL10 19-inch (48-cm) Color Panel Display Monitor displays PAL or NTSC standard color pictures in CCTV systems. The MON192CL10 monitor includes two (2) looping Composite Video BNC connector inputs, two (2) looping Audio RCA inputs, and two (2) looping Y/C (S-Video) input using a 4-pin mini-DIN. In addition, this model works with both DVI-I and VGA signals.

To enhance the multi-input capability, "Picture-in-Picture" allows any of the composite video or Y/C inputs to be inserted into each other, or into the DVI-I / VGA display.

Monitor control functions are accessed via the front panel push buttons and the multi-language On-screen Display (OSD). See *Figure 2.1* on page 2 for front panel descriptions.

3.1   Features

This high-performance, 19-inch Color Panel Display Monitor with 1280 X 1024 pixels resolution has been designed to display Digital DVI, Analog VGA, and Composite Video signals.

– 90 to 264 VAC Power Supply
– NTSC/PAL Auto-Detect
– 1280 x 1024 High Resolution
– VGA / DVI-I Input
– Composite Video Input
– Audio Input / Output
– PC Audio Input
– Y/C Input (S-Video)
– On-screen Display (OSD) with Multiple Languages
– De-Interlace Function
– Auto-detect 3D Comb Filter NTSC/PAL
– PIP, PAP, Channel Title

3.2   Power

Model No.	Rated Voltage	Voltage Range	Power at Rated Voltage	Sync Format
MON192CL10	120/230 VAC 50/60 Hz	90 to 264 V	55 W (max)	NTSC/PAL

4   Installing the MON192CL10

This chapter outlines the procedures needed to install the MON192CL10 Series. Installation should be made by a qualified service person and all local codes should be conformed to.

4.1   Mounting the MON192CL10

The MON192CL10 is designed to be used for desktop, wall, or rack mounting.

4.1.1   Desktop Installation

The MON192CL10 monitor is delivered with a 3-pole US-style power cord and a 3-pole Euro-style power cord. Use the US-style power cord where 120 VAC, 60 Hz power is available; and use the Euro-style power cord where 230 VAC, 50 Hz power is available. The monitor automatically adjusts to either power input voltage. A Power (ON/OFF) switch is located on the base of the unit.

4.1.2   Wall Mount Installation

The square mounting holes (100 mm (3.9 in.) centers) can be used for rack mount installation (refer to the MON171RK Rack Mount Kit Instructions or with wall mount brackets (not provided). To install the wall mount, do the following:

1. Remove the MON192CL10 power supply/base from the LCD panel section by unscrewing the two (2) holding screws before separating the base from the panel, as shown in *Figure 4.1* on page 5.

Fig. 4.1   Removing the Base

2. Remove the power bayonet connector from the panel (see *Figure 4.2* on page 6), while sliding the base off the monitor.

Fig. 4.2 Removing the Power Bayonet

3. Mount the unit to the mounting device (not provided) using the four (4) mounting holes on the rear panel. The square mounting hole patterns are standard on 100 mm (3.9 in.) centers, as shown in *Figure 4.3* on page 6.

Fig. 4.3 Mounting the Device

4.1.3   **Extension Cable Installation**

Use the Extension Cable (included with the MON192CL10) to place the power supply/base unit up to 1.5 m (5 ft) from the LCD panel for wall mount or rack mount installations.

1.   Follow the instructions in *Section 4.1.2: Wall Mount Installation* to remove the power supply/base from the LCD panel section.

2.   Attach the power supply extension cable by connecting one end of the extension cable (large connector) to the power supply/base, as shown in *Figure 4.4* on page 7.

Fig. 4.4   Attaching the Power Supply

3.   Connect the other end of the extension cable (small connector) to the power input connector on the rear side of the LCD panel, as shown in *Figure 4.5* on page 7.

Fig. 4.5   Connecting the Power Input

4.   Connect the appropriate ends of the IEC power cord to the power source (mains) and power supply/base unit.

5.   Toggle the power switch on the base to the ON position.

4.2   Connecting the Composite Video Signal to the Monitor

There are two (2) BNC connectors located on the rear of the monitor for composite video input and two (2) BNC connectors for composite video outputs (*Figure 2.2* on page 3). NOTE: All video inputs are active loop-through. The impedance is automatically set to 75 ohm by the input of the signal on the input connector, while operating in a single connection mode (*Figure 4.12* on page 12). If a cable is also connected to the output connector, the video signal can be passed on to another monitor connected to it via the active loop-through function. Up to three (3) monitors may be connected in this manner (*Figure 4.13* on page 12).

> **NOTICE!** To select between VIDEO 1 and VIDEO 2, press Input (*Figure 2.1* on page 2, Item 1) located on the front of the monitor.

4.3   Connecting the Y/C (S-Video) Signal to the Monitor

There is one (1) mini-DIN type connector for the S-Video (Y/C) input (see *Figure 4.6* on page 8).

NOTE: Both Y and C inputs are terminated with 75 ohm.
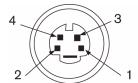
Fig. 4.6   Y/C Connection Pinout

Reference	Input
1	GND
2	GND
3	Y-signal IN or OUT
4	C-signal IN or OUT

4.4   Connecting Audio to the Monitor

There are two (2) sets of audio connectors (*Figure 4.7* on page 8); one set is audio input (R) and input (L); the second set is audio output (R) and audio output (L).
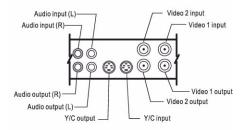
Fig. 4.7   Connecting the Audio

4.5   Connecting the PC Audio to the Monitor

There is one (1) audio input for the PC (see *Figure 4.8* on page 9); for use with the supplied Mini Phone Jack Audio Cable. The audio input is designed to accept line level audio, 1 V peak to peak.

4.6   Connecting the VGA / DVI-I Signal to the Monitor

The monitor can be connected two ways:
Connect the analog VGA signal by using the provided VGA cable (DVI-A to D-SUB)
- or-
Connect the digital DVI-I signal by using the DVI cable (DVI-D to DVI-D) provided.
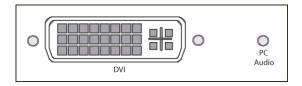
Fig. 4.8   DVI-I Input and Audio Connector

4.7   Identifying the DVI Cable

The MON192CL10 has a DVI-I connector which supports digital (DVI) and analog (VGA) signals. The unit is supplied with two (2) different DVI cables.

4.7.1   DVI-A to VGA (D-SUB)

If the source has a VGA connector use the VGA cable (DVI-A to D-SUB) provided.
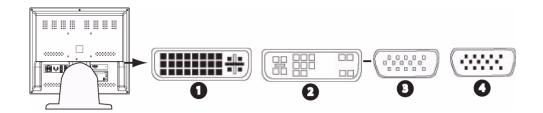
Fig. 4.9   DVI-A to VGA (D-SUB)

Reference #	Description
1	MON192CL10 DVI-I Female Connector
2, 3	DVI-A Male to D-SUB Male Cable
4	Source D-SUB Female Connector

4.7.2   DVI to DVI

If the source has a DVI-I or DVI-D connector, use the DVI-D to DVI-D cable provided.
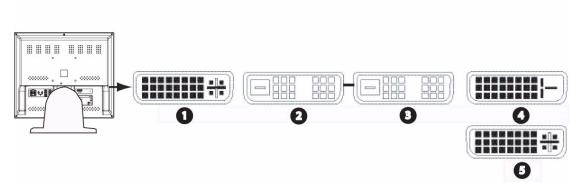
Fig. 4.10   DVI-I to either DVI-D or DVI-I

Reference #	Description
1	MON192CL10 DVI-I Female Connector
2, 3	DVI-D Male to DVI-D Male Cable
4, 5	Source DVI-D Female or DVI-I Female Connector

4.7.3   Using a Quad Output Adapter / DMS-59 Connection

A quad output adapter (not supplied) can be used to connect up to four LCD monitors. The best connection would require a DMS to DVI splitter cable for two (2) monitors or two (2) splitter cables to support up to four (4) monitors. The cables used should be the ones recommended by the manufacturer of the graphics card along with the DVI-D to DVI-D cable included.
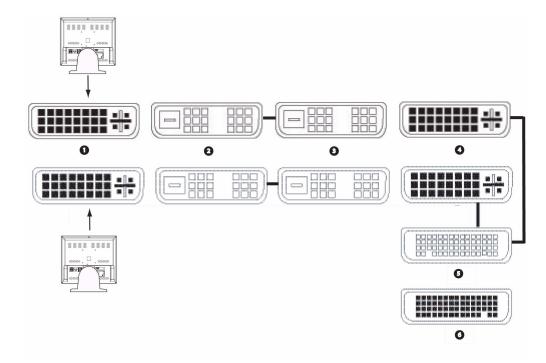
Fig. 4.11   DMS-59 Connection for two (2) monitors

Reference #	Description
1	MON192CL10 DVI-I Female Connectors
2, 3	DVI-D Male to DVI-D Male Cables
4, 5	DMS-59 Male Cable to two (2) DVI-I Female Cable
6	Source DMS-59 Female Connector

4.8 Ventilation

To prevent overheating, ensure that the ventilation openings on the rear of the monitor are not covered.

4.9 Single / Multiple Monitor Configuration
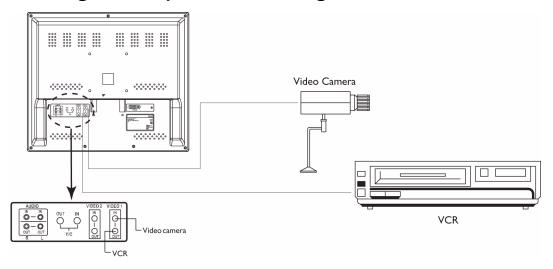
Fig. 4.12 Single Monitor Configuration
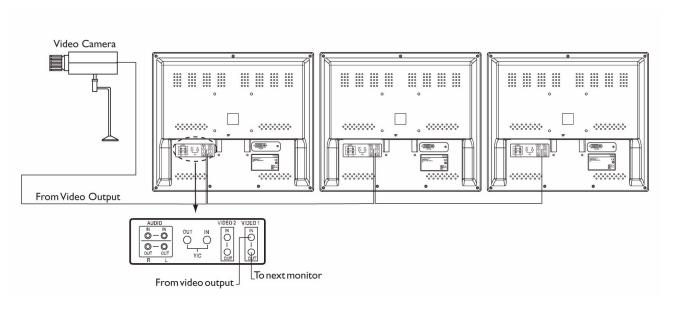
Fig. 4.13 Multiple Monitor Configuration

5   Navigating the Monitor

5.1   Navigating the Front Panel

Use the front panel to make any necessary OSD adjustments to the MON192CL10. To navigate the set up menus, see *Figure 5.1* on page 13.
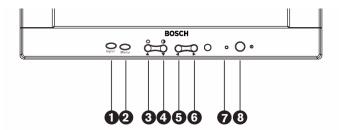
Fig. 5.1   Front Panel Buttons

Reference	Button	Description	
1	Input Button	Selects the signal to be displayed	
2	Menu Button	Selects the on-screen display (OSD)	
3	▲	Adjusts the brightness (available in PC & VGA modes; DVI mode refers to this button as backlight)	Scrolls up in the OSD
4	▼	Adjusts the contrast (available in PC & VGA modes; must use PC graphics card for DVI mode)	Scrolls down in the OSD
5	◀	Decreases the value	Scrolls left in the OSD
6	▶	Increases the value	Scrolls right in the OSD
7	LED Indicator	Power on (green) Standby (amber) Sleep mode (flashing amber)	
8	Green Power Button	Display power (On/Off)	

5.2   Front Panel Lock-out Feature

To lock the front panel, press and hold the up, down, left, and right buttons simultaneously until a message flashes "Key Locked", then release. To unlock the front panel, press and hold the up, down, left, and right buttons simultaneously until a message flashes "Key Unlocked", then release.

5.3   Navigating the Monitor On-screen Display (OSD)

The MON192CL10 has two (2) modes, Video and VGA. The MON192CL10 is programmed through the on-screen display (OSD) menus. Each on-screen display (OSD) shows a list of parameters or submenus that can be selected by the operator. To access the OSD menus, press the Menu button. Use the front panel of the MON192CL10 to make any necessary adjustments to the OSD. To navigate the set up menus, follow the steps below:

1. Connect the CVBS, VGA, or DVI cable.
2. If required, press the Input button until a signal is displayed. NOTE: Menus are not available without a signal applied.
3. Power on the unit by pressing the power button (see *Figure 5.1* on page 13).
4. Press the Menu button to activate the main menu selections (see *Figure 5.1* on page 13).
5. Press the ▲ and ▼ buttons to navigate in selecting a main menu.
6. Press the Menu button to enter into the selected main menu.
7. Press the ◀ and ▶ button to toggle the OSD values.

When finished, scroll down to Exit and press the Menu button. NOTE: If there is no Exit button, press the Menu button.

5.4　On-screen Display Menus

There are ten (10) on-screen main menus which allow you to customize your settings. Press the Menu button to access the OSD menu.

Icon	Menu	Function
	Tint	Adjusts the contrast and brightness of the OSD. NOTE: Applicable to NTSC only, not available in PAL format.
	Color	Adjusts the overall intensity of the screen.
	Sharpness	Adjusts the sharpness level for video performance (range 0-100).
	Default	Resets most settings to the factory pre-set values (brightness, contrast, tint, color, and volume).
	Language	Adjusts the language of the OSD. Choices include: English, French, German, Italian, Dutch, Spanish, and Portuguese.
	Channel Title	Selects and enables the 16-character title per input channel.
	Under Scan	Enables or disables the Under Scan function.
	3D Comb Filter	Enables or disables the 3D Comb Filter. When disabled a 2D Comb Filter is applied.
	PIP Menu	Selects the picture-in-picture application.
	Power-On Options	Selects the video input to be displayed upon power-up after a power interruption. The factory default setting is VIDEO 1.
	Input Enable / Disable	Enables or disables the input selections. Selects the video source. Choices include: VGA, S-Video, or CVBS.
	Volume	Adjusts the volume for the audio inputs.
	Exit	Exits the OSD menu.

5.5   Video Mode

▶   To access the OSD video mode, press the Menu button. The following is displayed:

	TINT	
	COLOR	
	SHARPNESS	
	DEFAULT	
	LANGUAGE	
	Channel Title	
	UNDERSCAN	DISABLE
	3D COMB FILTER	DISABLE
	PIP MENU	
	POWER-ON OPTIONS	
	INPUT ENABLE/DISABLE	
	VOLUME	
	EXIT	
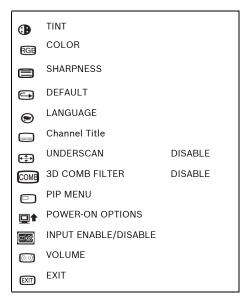
Fig. 5.2 Video Mode OSD

Menu	Default Setting	Function
Tint	50	Adjusts tint level; for best results, adjust until skin color is natural (range 0-100). NOTE: Applicable to NTSC only; not available in PAL format.
Color	50	Adjusts the overall color intensity of the screen (range 0-100).
Sharpness	50	Adjusts the sharpness level for video performance (range 0-100).
Default		Enables factory default settings for brightness, contrast, tint, color, and volume.
Language	English	Selects the language for the OSD text, available in English, French, German, Italian, Spanish, Dutch, and Portuguese.
Channel Title		Allows selection of and enables the 16-character title per input channel.
UnderScan		Enables or disables the UnderScan function.
3D Comb Filter	Disable	Enables or disables the 3D Comb Filter. When disabled, a 2D Comb Filter is applied.
PIP Menu		Selects the picture-in-picture application.
Power-on Options	VIDEO 1	Selects the video input to be displayed upon power-up after a power interruption.

Input Enable/Disable		Enables or disables the input selections. NOTE: To disable switching to inputs that are not connected, Disable the unused Input in this menu. Example: Only VIDEO 1 and the DVI-I are connected S-Video and Video 2 are not connected and are disabled. Press INPUT to scroll from VIDEO 1 to PC, then back to VIDEO 1 again.
Volume	50	Adjusts the volume for the audio inputs (range 0-100).
Exit		Exits the OSD Menu and returns to standard monitor display.

5.6 VGA Mode

To access the OSD for VGA mode, press the Menu button. The following is displayed:

AUTO SET

DISPLAY SETTING

COLOR TEMPERATURE

LANGUAGE

VOLUME

DEFAULT

PIP MENU

POWER-ON OPTIONS

INPUT ENABLE/DISABLE

INFORMATION

EXIT
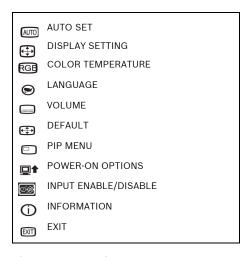
Fig. 5.3 VGA Mode OSD

Menu	Default Setting	Function
Auto Set		Automatic adjustment of H. Position, V. Position, phase and clock values.
Display Setting		Adjusts the H. Position, V. Position, fine tune, sharpness, and track. NOTE: Track means section of filter for best performance.
Color Temperature	6500 K	Selects the color temperature of the LCD monitor; 6500 K (warm) or 9300 K (cool).
Language	English	Selects the language for the OSD text, available in English, French, German, Italian, Spanish, Dutch, and Portuguese.
Volume	50	Adjusts the volume for the audio inputs.
Default		Enables factory default settings for brightness, contrast, tint, color, and volume.
PIP Menu		Selects the picture-in-picture application.
Power-on Options	VIDEO 1	Selects the video input to be displayed upon power-up after a power interruption.

Input Enable/Dis-able	All enabled	Enables or disables the input selections. NOTE: To disable switching to inputs that are not connected, Disable the unused Input in this menu. Example: Only VIDEO 1 and the DVI-I are connected S-Video and VIDEO 2 are not connected and are disabled. Press INPUT to scroll form VIDEO 1 to PC, then back to VIDEO 1 again.
Information		Displays information about the type of connection.
Exit		Exits the OSD Menu and returns to standard monitor display.

6   Special Features

6.1   ▭ Channel Title (Video only)

The Channel Title menu displays the name of the active input at the bottom of the screen. The Title Editing feature edits the 16-character title for VIDEO 1, VIDEO 2, and S-Video. The Channel Title feature enables/disables the channel title.

◑	TINT
RGB	COLOR
▭	SHARPNESS
⊡→	DEFAULT
◉	LANGUAGE
▭	**CHANNEL TITLE**
⊞	UNDERSCAN DISABLE
COMB	3D COMB FILTER DISABLE
▭	PIP MENU
🖵↑	POWER-ON OPTIONS
▭	INPUT ENABLE/ DISABLE
((•))	VOLUME
EXIT	EXIT

▭	CHANNEL TITLE
	TITLE EDITING
	CHANNEL TITLE DISABLE
EXIT	EXIT

TITLE EDITING	
VIDEO 1:	VIDEO1
VIDEO 2:	VIDEO2
S-VIDEO	S-VIDEO
EXIT	
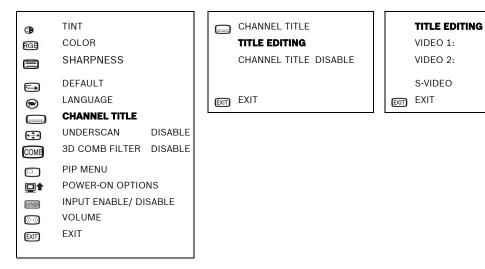
Fig. 6.1   Channel Title Submenus

Submenu	Default Setting	Definition
Title Editing		Edits the 16-character title for VIDEO 1, VIDEO 2, and S-Video
Channel Title	Disable	Enables/disables the channel title
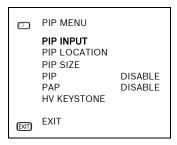
6.2 ⬜ PIP Menu (Video and VGA)
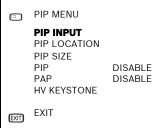
To enhance the multi-input capability, "Picture-in-Picture" allows any of the composite video or S-Video inputs to be inserted into each other, or into the VGA/DVI display.

```
⬜  PIP MENU

    PIP INPUT
    PIP LOCATION
    PIP SIZE
    PIP                 DISABLE
    PAP                 DISABLE
    HV KEYSTONE

EXIT  EXIT
```
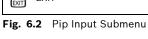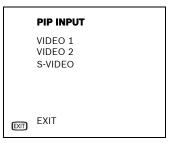
Submenu	Definition
PIP Input	Selects composite or S-Video signal for use in the PIP or the PAP window NOTES: • VGA/DVI-I can not be selected for PIP/PAP window display • The PIP window will be displayed on all channels
PIP Location	Positions PIP window in any corner of the display or in a custom location
PIP Size	Sets PIP window size to one of the following: • Small (6.3 in. diagonal) • Medium (7.9 in. diagonal) • Large (9.5 in. diagonal)
PIP	Enables/disables PIP window
PAP	Enables/disables PAP window
HV Keystone	Tilts entire picture in horizontal and/or vertical direction; used to adjust the picture in monitor wall applications

6.2.1 PIP Input

– The PAP feature splits the screen vertically; displaying the PAP image on the left side and the composite/S-video signal on the right side.
– The PAP function will not work with a VGA/DVI signal.
– The signal processing of the PIP/PAP compared to the main window causes a difference in sharpness and color.
– PIP, PAP, and Channel Title can not be combined. Only one can be enabled at a time.
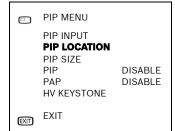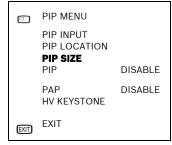
```
⬜  PIP MENU                        PIP INPUT

    PIP INPUT                       VIDEO 1
    PIP LOCATION                    VIDEO 2
    PIP SIZE                        S-VIDEO
    PIP             DISABLE
    PAP             DISABLE
    HV KEYSTONE

EXIT  EXIT                     EXIT  EXIT
```

Fig. 6.2 Pip Input Submenu

6.2.2   PIP Location

```
┌─────────────────────────────┐   ┌─────────────────────────────┐
│ ⬜  PIP MENU                 │   │ PIP LOCATION                │
│                             │   │                             │
│     PIP INPUT               │   │ TOP LEFT                    │
│     PIP LOCATION            │   │ TOP RIGHT                   │
│     PIP SIZE                │   │ BOTTOM RIGHT                │
│     PIP           DISABLE   │   │ BOTTOM LEFT                 │
│     PAP           DISABLE   │   │ PIP H. POSITION             │
│     HV KEYSTONE             │   │ PIP V. POSITION             │
│                             │   │                             │
│ EXIT  EXIT                  │   │ EXIT  EXIT                  │
└─────────────────────────────┘   └─────────────────────────────┘
```

Submenu	Default Setting	Definition
PIP H. Position		Adjusts the horizontal position (1-7)
PIP V. Position		Adjusts the vertical position (1-10)

6.2.3   PIP Size

```
┌─────────────────────────────┐   ┌─────────────────────────────┐
│ ⬜  PIP MENU                 │   │ PIP SIZE                    │
│                             │   │                             │
│     PIP INPUT               │   │ SMALL                       │
│     PIP LOCATION            │   │ MEDIUM                      │
│     PIP SIZE                │   │ LARGE                       │
│     PIP           DISABLE   │   │ EXIT  EXIT                  │
│                             │   │                             │
│     PAP           DISABLE   │   │                             │
│     HV KEYSTONE             │   │                             │
│                             │   └─────────────────────────────┘
│ EXIT  EXIT                  │
└─────────────────────────────┘
```
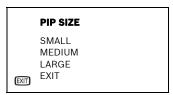
Fig. 6.3   PIP Size Submenu

6.2.4   HV Keystone

```
┌─────────────────────────────┐   ┌─────────────────────────────┐
│ ⬜  PIP MENU                 │   │                             │
│                             │   │ HORI. KEYSTONE        0     │
│     PIP INPUT               │   │                             │
│     PIP LOCATION            │   │ VERT. KEYSTONE        0     │
│     PIP SIZE                │   │                             │
│     PIP           DISABLE   │   │                             │
│     PAP           DISABLE   │   │                             │
│     HV KEYSTONE             │   │                             │
│                             │   └─────────────────────────────┘
│ EXIT  EXIT                  │
└─────────────────────────────┘
```
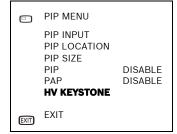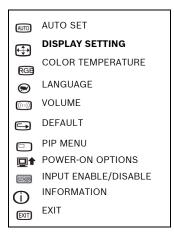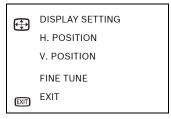
Fig. 6.4   HV Keystone Submenu

Submenu	Default Setting	Definition
Horizontal Keystone	0	Adjusts the horizontal position (-40 - +40)
Vertical Keystone	0	Adjusts the vertical position (-40 - +40)

6.3 ⊞ Display Setting Menu (VGA)

AUTO	AUTO SET
⊞	**DISPLAY SETTING**
RGB	COLOR TEMPERATURE
◉	LANGUAGE
(((•)))	VOLUME
⊡	DEFAULT
▭	PIP MENU
▯↑	POWER-ON OPTIONS
▱	INPUT ENABLE/DISABLE
ⓘ	INFORMATION
EXIT	EXIT

⊞	DISPLAY SETTING
	H. POSITION
	V. POSITION
	FINE TUNE
EXIT	EXIT
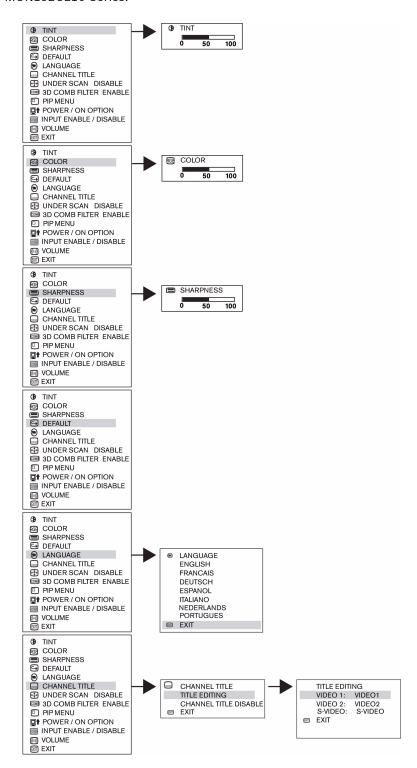
Submenu	Default Setting	Definition
H. Position	*	Adjusts the horizontal position (0-400)
V. Position	*	Adjusts the vertical position (0-100)
Fine Tune	*	Adjusts within a range of 0-100
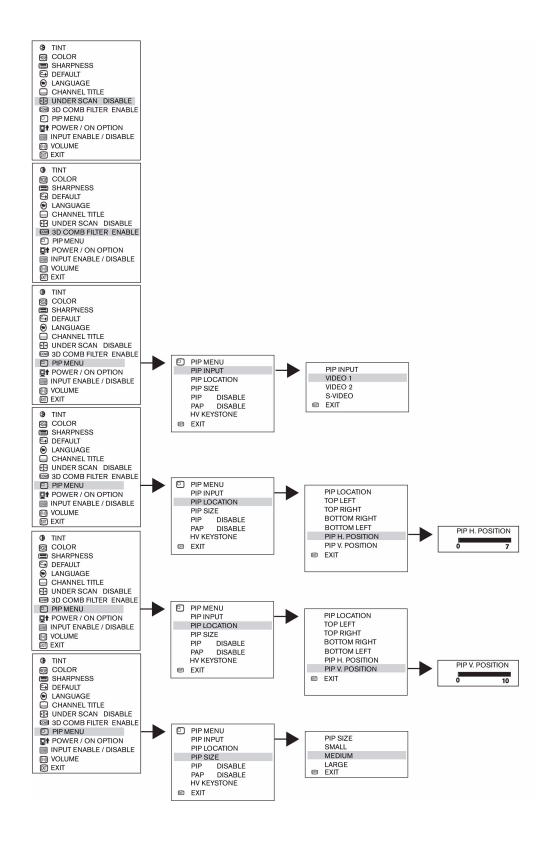
*Values within the Image Setup and Image Position menus are automatically adjusted to match the graphics adapter of the PC when power is applied. Therefore, the value displayed when entering the menu is within the specified range.

7   On-screen Display Menu Reference

This chapter outlines the menus for the Video and VGA mode (NTSC only) for the MON192CL10 Series.

```
  ⊕  TINT
 RGB COLOR
 ▭  SHARPNESS
 ⊟  DEFAULT
 ⊛  LANGUAGE
 ▭  CHANNEL TITLE
 ⊞  UNDER SCAN   DISABLE
COMB 3D COMB FILTER  ENABLE
 ▭  PIP MENU
 ▣↑ POWER / ON OPTION
 ▨  INPUT ENABLE / DISABLE
 ⊙  VOLUME
EXIT EXIT
```

```
  ⊕  TINT
 RGB COLOR
 ▭  SHARPNESS
 ⊟  DEFAULT
 ⊛  LANGUAGE
 ▭  CHANNEL TITLE
 ⊞  UNDER SCAN   DISABLE
COMB 3D COMB FILTER  ENABLE
 ▭  PIP MENU
 ▣↑ POWER / ON OPTION
 ▨  INPUT ENABLE / DISABLE
 ⊙  VOLUME
EXIT EXIT
```

```
  ⊕  TINT
 RGB COLOR
 ▭  SHARPNESS
 ⊟  DEFAULT
 ⊛  LANGUAGE
 ▭  CHANNEL TITLE
 ⊞  UNDER SCAN   DISABLE
COMB 3D COMB FILTER  ENABLE
 ▭  PIP MENU
 ▣↑ POWER / ON OPTION
 ▨  INPUT ENABLE / DISABLE
 ⊙  VOLUME
EXIT EXIT
```

```
 ▭  PIP MENU
    PIP INPUT
    PIP LOCATION
    PIP SIZE
    PIP      DISABLE
    PAP      DISABLE
    HV KEYSTONE
 ▭  EXIT
```

```
    PIP INPUT
    VIDEO 1
    VIDEO 2
    S-VIDEO
 ▭  EXIT
```

```
  ⊕  TINT
 RGB COLOR
 ▭  SHARPNESS
 ⊟  DEFAULT
 ⊛  LANGUAGE
 ▭  CHANNEL TITLE
 ⊞  UNDER SCAN   DISABLE
COMB 3D COMB FILTER  ENABLE
 ▭  PIP MENU
 ▣↑ POWER / ON OPTION
 ▨  INPUT ENABLE / DISABLE
 ⊙  VOLUME
EXIT EXIT
```

```
 ▭  PIP MENU
    PIP INPUT
    PIP LOCATION
    PIP SIZE
    PIP      DISABLE
    PAP      DISABLE
    HV KEYSTONE
 ▭  EXIT
```

```
    PIP LOCATION
    TOP LEFT
    TOP RIGHT
    BOTTOM RIGHT
    BOTTOM LEFT
    PIP H. POSITION
    PIP V. POSITION
 ▭  EXIT
```

```
    PIP H. POSITION
    0             7
```

```
  ⊕  TINT
 RGB COLOR
 ▭  SHARPNESS
 ⊟  DEFAULT
 ⊛  LANGUAGE
 ▭  CHANNEL TITLE
 ⊞  UNDER SCAN   DISABLE
COMB 3D COMB FILTER  ENABLE
 ▭  PIP MENU
 ▣↑ POWER / ON OPTION
 ▨  INPUT ENABLE / DISABLE
 ⊙  VOLUME
EXIT EXIT
```

```
 ▭  PIP MENU
    PIP INPUT
    PIP LOCATION
    PIP SIZE
    PIP      DISABLE
    PAP      DISABLE
    HV KEYSTONE
 ▭  EXIT
```

```
    PIP LOCATION
    TOP LEFT
    TOP RIGHT
    BOTTOM RIGHT
    BOTTOM LEFT
    PIP H. POSITION
    PIP V. POSITION
 ▭  EXIT
```

```
    PIP V. POSITION
    0            10
```

```
  ⊕  TINT
 RGB COLOR
 ▭  SHARPNESS
 ⊟  DEFAULT
 ⊛  LANGUAGE
 ▭  CHANNEL TITLE
 ⊞  UNDER SCAN   DISABLE
COMB 3D COMB FILTER  ENABLE
 ▭  PIP MENU
 ▣↑ POWER / ON OPTION
 ▨  INPUT ENABLE / DISABLE
 ⊙  VOLUME
EXIT EXIT
```

```
 ▭  PIP MENU
    PIP INPUT
    PIP LOCATION
    PIP SIZE
    PIP      DISABLE
    PAP      DISABLE
    HV KEYSTONE
 ▭  EXIT
```

```
    PIP SIZE
    SMALL
    MEDIUM
    LARGE
 ▭  EXIT
```

TINT
COLOR
SHARPNESS
DEFAULT
LANGUAGE
CHANNEL TITLE
UNDER SCAN   DISABLE
3D COMB FILTER ENABLE
PIP MENU
POWER - ON OPTIONS
INPUT ENABLE / DISABLE
VOLUME
EXIT

PIP MENU
PIP INPUT
PIP LOCATION
PIP SIZE
PIP   DISABLE
PAP   DISABLE
HV KEYSTONE
EXIT

TINT
COLOR
SHARPNESS
DEFAULT
LANGUAGE
CHANNEL TITLE
UNDER SCAN   DISABLE
3D COMB FILTER ENABLE
PIP MENU
POWER - ON OPTIONS
INPUT ENABLE / DISABLE
VOLUME
EXIT

PIP MENU
PIP INPUT
PIP LOCATION
PIP SIZE
PIP   DISABLE
PAP   DISABLE
HV KEYSTONE
EXIT

TINT
COLOR
SHARPNESS
DEFAULT
LANGUAGE
CHANNEL TITLE
UNDER SCAN   DISABLE
3D COMB FILTER ENABLE
PIP MENU
POWER - ON OPTIONS
INPUT ENABLE / DISABLE
VOLUME
EXIT

PIP MENU
PIP INPUT
PIP LOCATION
PIP SIZE
PIP   DISABLE
PAP   DISABLE
HV KEYSTONE
EXIT

HORI. KEYSTONE   0
VERI. KEYSTONE   0

TINT
COLOR
SHARPNESS
DEFAULT
LANGUAGE
CHANNEL TITLE
UNDER SCAN   DISABLE
3D COMB FILTER ENABLE
PIP MENU
POWER - ON OPTIONS
INPUT ENABLE / DISABLE
VOLUME
EXIT

POWER - ON OPTIONS
VIDEO 1
VIDEO 2
S-VIDEO
PC
STANDBY
EXIT

TINT
COLOR
SHARPNESS
DEFAULT
LANGUAGE
CHANNEL TITLE
UNDER SCAN   DISABLE
3D COMB FILTER ENABLE
PIP MENU
POWER - ON OPTIONS
INPUT ENABLE / DISABLE
VOLUME
EXIT

INPUT ENABLE / DISABLE
VIDEO 1   ENABLE
VIDEO 2   ENABLE
S-VIDEO   ENABLE
PC   ENABLE
EXIT

TINT
COLOR
SHARPNESS
DEFAULT
LANGUAGE
CHANNEL TITLE
UNDER SCAN   DISABLE
3D COMB FILTER ENABLE
PIP MENU
POWER - ON OPTIONS
INPUT ENABLE / DISABLE
VOLUME
EXIT

VOLUME
0   50

VGA Mode

AUTO	AUTO SET
⊞	DISPLAY SETTING
RGB	COLOR TEMPERATURE
◉	LANGUAGE
▭	VOLUME
⮌	DEFAULT
▢	PIP MENU
▣↑	POWER-ON OPTIONS
▦	INPUT ENABLE/DISABLE
①	INFORMATION
EXIT	EXIT

→

⊞	DISPLAY SETTING
	H. POSITION
	V. POSITION
	FINE TUNE
⊡	EXIT

→

H. POSITION
0   111   400

AUTO	AUTO SET
⊞	DISPLAY SETTING
RGB	COLOR TEMPERATURE
◉	LANGUAGE
▭	VOLUME
⮌	DEFAULT
▢	PIP MENU
▣↑	POWER-ON OPTIONS
▦	INPUT ENABLE/DISABLE
①	INFORMATION
EXIT	EXIT

→

⊞	DISPLAY SETTING
	H. POSITION
	V. POSITION
	FINE TUNE
⊡	EXIT

→

V. POSITION
0   50   100

AUTO	AUTO SET
⊞	DISPLAY SETTING
RGB	COLOR TEMPERATURE
◉	LANGUAGE
▭	VOLUME
⮌	DEFAULT
▢	PIP MENU
▣↑	POWER-ON OPTIONS
▦	INPUT ENABLE/DISABLE
①	INFORMATION
EXIT	EXIT

→

⊞	DISPLAY SETTING
	H. POSITION
	V. POSITION
	FINE TUNE
⊡	EXIT

→

FINE TUNE
0   50   100

AUTO	AUTO SET
⊞	DISPLAY SETTING
RGB	COLOR TEMPERATURE
◉	LANGUAGE
▭	VOLUME
⮌	DEFAULT
▢	PIP MENU
▣↑	POWER-ON OPTIONS
▦	INPUT ENABLE/DISABLE
①	INFORMATION
EXIT	EXIT

→

RGB	COLOR TEMPERATURE
	6500K
	9300K
⊡	EXIT

AUTO	AUTO SET
⊞	DISPLAY SETTING
RGB	COLOR TEMPERATURE
◉	LANGUAGE
▭	VOLUME
⮌	DEFAULT
▢	PIP MENU
▣↑	POWER-ON OPTIONS
▦	INPUT ENABLE/DISABLE
①	INFORMATION
EXIT	EXIT

→

◉	LANGUAGE
	ENGLISH
	FRANCAIS
	DEUTSCH
	ESPANOL
	ITALIANO
	NEDERLANDS
	PORTUGUES
⊡	EXIT

AUTO	AUTO SET
⊞	DISPLAY SETTING
RGB	COLOR TEMPERATURE
◉	LANGUAGE
▭	VOLUME
⮌	DEFAULT
▢	PIP MENU
▣↑	POWER-ON OPTIONS
▦	INPUT ENABLE/DISABLE
①	INFORMATION
EXIT	EXIT

→

VOLUME
0   50   100

```
AUTO  AUTO SET
      DISPLAY SETTING
RGB   COLOR TEMPERATURE
      LANGUAGE
      VOLUME
      DEFAULT        OK
      PIP MENU
      POWER-ON OPTIONS
      INPUT ENABLE/DISABLE
  i   INFORMATION
EXIT  EXIT
```

```
AUTO  AUTO SET
      DISPLAY SETTING
RGB   COLOR TEMPERATURE
      LANGUAGE
      VOLUME
      DEFAULT
      PIP MENU
      POWER-ON OPTIONS
      INPUT ENABLE/DISABLE
  i   INFORMATION
EXIT  EXIT
```
→
```
      PIP MENU
      PIP INPUT
      PIP LOCATION
      PIP SIZE
      PIP        DISABLE
      PAP        DISABLE
      HV KEYSTONE
      EXIT
```
→
```
      PIP INPUT
      VIDEO 1
      VIDEO 2
      S-VIDEO
      EXIT
```

```
AUTO  AUTO SET
      DISPLAY SETTING
RGB   COLOR TEMPERATURE
      LANGUAGE
      VOLUME
      DEFAULT
      PIP MENU
      POWER-ON OPTIONS
      INPUT ENABLE/DISABLE
  i   INFORMATION
EXIT  EXIT
```
→
```
      PIP MENU
      PIP INPUT
      PIP LOCATION
      PIP SIZE
      PIP        DISABLE
      PAP        DISABLE
      HV KEYSTONE
      EXIT
```
→
```
      PIP LOCATION
      TOP LEFT
      TOP RIGHT
      BOTTOM RIGHT
      BOTTOM LEFT
      PIP H. POSITION
      PIP V. POSITION
      EXIT
```
→
```
      PIP H. POSITION
      0            7
```

```
AUTO  AUTO SET
      DISPLAY SETTING
RGB   COLOR TEMPERATURE
      LANGUAGE
      VOLUME
      DEFAULT
      PIP MENU
      POWER-ON OPTIONS
      INPUT ENABLE/DISABLE
  i   INFORMATION
EXIT  EXIT
```
→
```
      PIP MENU
      PIP INPUT
      PIP LOCATION
      PIP SIZE
      PIP        DISABLE
      PAP        DISABLE
      HV KEYSTONE
      EXIT
```
→
```
      PIP LOCATION
      TOP LEFT
      TOP RIGHT
      BOTTOM RIGHT
      BOTTOM LEFT
      PIP H. POSITION
      PIP V. POSITION
      EXIT
```
→
```
      PIP V. POSITION
      0           10
```

```
AUTO  AUTO SET
      DISPLAY SETTING
RGB   COLOR TEMPERATURE
      LANGUAGE
      VOLUME
      DEFAULT
      PIP MENU
      POWER-ON OPTIONS
      INPUT ENABLE/DISABLE
  i   INFORMATION
EXIT  EXIT
```
→
```
      PIP MENU
      PIP INPUT
      PIP LOCATION
      PIP SIZE
      PIP        DISABLE
      PAP        DISABLE
      HV KEYSTONE
      EXIT
```
→
```
      PIP SIZE
      SMALL
      MEDIUM
      LARGE
      EXIT
```

```
AUTO  AUTO SET
      DISPLAY SETTING
RGB   COLOR TEMPERATURE
      LANGUAGE
      VOLUME
      DEFAULT
      PIP MENU
      POWER-ON OPTIONS
      INPUT ENABLE/DISABLE
  i   INFORMATION
EXIT  EXIT
```
→
```
      PIP MENU
      PIP INPUT
      PIP LOCATION
      PIP SIZE
      PIP        DISABLE
      PAP        DISABLE
      HV KEYSTONE
      EXIT
```

```
AUTO  AUTO SET
      DISPLAY SETTING
RGB   COLOR TEMPERATURE
      LANGUAGE
      VOLUME
      DEFAULT
      PIP MENU
      POWER-ON OPTIONS
      INPUT ENABLE/DISABLE
  i   INFORMATION
EXIT  EXIT
```
→
```
      PIP MENU
      PIP INPUT
      PIP LOCATION
      PIP SIZE
      PIP        DISABLE
      PAP        DISABLE
      HV KEYSTONE
      EXIT
```
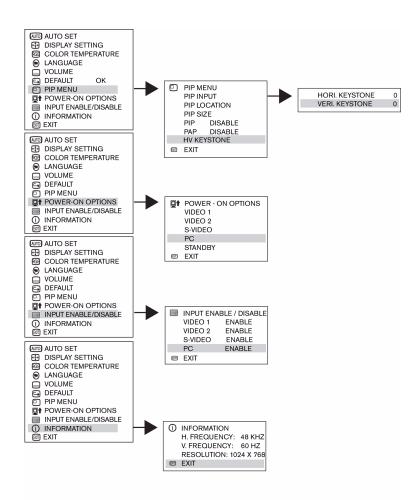
The error message "PC Out of Range" is displayed in the VGA/DVI mode if the PC is operating with either a resolution or timing mode that is not supported by the MON192CL. Change the PC settings to one of the valid combinations below:

VGA / DVI Timing Modes:	640 x 480	60/72/75 Hz
	800 x 600	60/72/75 Hz
	1024 x 768	60/70/75 Hz
	1280 x 1024	60/75 Hz

Note: 640 x 480 is not supported in DVI operation.

8   Maintenance

To clean the LCD panel, wipe off water droplets or oil immediately with absorbent cotton or a soft lint-free cloth. Staining and discoloration may occur if left on the panel for long periods.

If the surface (polarizer) of the LCD panel is dirty or stained, use absorbent cotton or a soft lint-free cloth to remove the residue as follows:

1.   Turn off the computer or display.
2.   Do not spray any liquid directly on the screen. Dampen a clean, soft, lint-free cloth with water only (using a paper towel or dirty cloth can scratch the screen).
3.   Gently wipe the screen starting from the top of the screen to bottom wiping in a downward motion. Be careful not to press too hard to avoid damaging the screen.
4.   To avoid streaking, wipe the screen again with another clean, dry, lint-free cloth.

NOTE: If water does not work, use a mild cleaner labeled for use with LCD panels, available at office supply stores.

Do not use any of the following as a cleaning agent:
–   Ketone type materials
–   Ethyl alcohol
–   Ethyl acid
–   Tolulene
–   Methyl chloride
–   Ammonia

Use of these materials may permanently damage the polarizer due to a chemical reaction.

9   Specifications

| MON192CL10 19-inch Color LCD Flat Panel Display Monitor

Technical Specifications

Electrical

Rated Voltage	120/230 VAC, 50/60 Hz
Voltage Range	90 to 264
Power at Rated Voltage	55 W
Sync Format	PAL/NTSC
LCD Panel	TFT LCD
Screen Size (H x V)	376.32 x 301.06 mm (14.8 x 11.9 in.)
Viewable Picture Area	19 in. (48 cm) measured diagonally
Pixel Pitch (H x V)	0.294 x 0.294 mm (0.01 x 0.01 in.)
Resolution	1280 x 1024 pixels; 500 TV lines typical
Aspect Ratio	5:4
Display Colors	8-bit interface; 16.7 million colors
Response Time	8 ms (grey to grey)
Backlight	Four (4) cold cathode fluorescent tubes, rated life 50,000 hours, at 50% brightness

Optical Characteristics

Luminance	300 cd/m^2, hard-coating (3H), non-glare treatment
Contrast Ratio (CR)	1000:1
Viewing Angle	178° horizontal, 178° vertical @ CR ≥ 10

Video Input

Composite Video (CVBS)	1.0 Vp-p (0.5–1.5 Vp-p), automatic switching from 75 Ohm unbalanced termination to Hi-Z with passive loop-through operation
Y/C (S-video)	0.7 Vp-p (Y-signal), 0.3 Vp-p (C-signal), 75 Ohm termination
Picture-in-Picture	Video 1, Video 2, S-Video

VGA / DVI Input

Analog RGB	0.7 Vp-p (0.5–1 Vrms)
Picture-in-Picture	Video 1, Video 2, S-Video
VGA / DVI Timing Modes	640 x 480, 60/72/75 Hz (VGA only) 800 x 600, 60/72/75 Hz 1024 x 768, 60/70/75 Hz 1280 x 1024, 60/75 Hz
Audio Input	1.0 V line level
Audio Output	Loop-through line level Speaker: two (2), 1 W

Controls

Front Panel	Push-buttons
Input	Selects Video 1, Video 2, S-Video, DVI, or VGA input

Controls

Menu	Selects on-screen display (OSD) Up cursor, brightness select Down cursor, contrast select Adjustment decrease Adjustment increase
Power	On/Off
Front Panel Lockout	Multiple push-button combination

On-Screen Display

Video	Tint (NTSC only), Color, Sharpness, Default, Language, Channel Title, Underscan, 3-D Comb Filter, PIP Menu, Power-on Options, Volume, Input Enable/Disable, Exit
VGA / DVI	Auto Set, Display Setting, Color Temperature, Language, Volume, Default, PIP Menu, Power-on Options, Input Enable/Disable, Information, Exit

Indicators

LED	Power On (green), Standby (amber), Sleep Mode (flashing amber)
On-Screen	"No Signal" (flashing)

Connectors

Video 1	Composite video: two (2) BNC (1 in, 1 out)
Video 2	Composite video: two (2) BNC (1 in, 1 out)
Y/C (S-video)	Two (2) mini-DIN, 4-pin (1 in, 1 out)
Audio	PC: one (1) 1/8 in. mini phono plug Aux: two (2) (left/right) RCA and looping output
DVI-I	One (1) VGA to DVI cable included One (1) DVI to DVI cable included
Power Cord	Two (2), 3-wire with a grounded plug, 1.8 m (6 ft) long. One (1) with a European/Continental plug type and one (1) with a U.S. plug type

Mechanical

Cabinet	Material: ABS94V0 plastic Finish: Charcoal Wall mounting compatible with standard bracket, 100 mm centers, M4 thread

Dimensions

Monitor with Base (W x H x D)	440 x 428 x 196 mm (17.3 x 16.9 x 7.7 in.)
Monitor Only (W x H x D)	440 x 375 x 84 mm (17.3 x 14.8 x 3.3 in.)
Weight	Monitor with base: 7.4 kg (16.31 lb) Monitor only: 5.6 kg (12.35 lb)

Environmental

Operating Temp.	0°C to 40°C (32°F to 104°F)
Storage Temp.	−20°C to 60°C (−4°F to 140°F)
Humidity	10%–95%, non-condensing